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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,618	01/30/2004	Bert Pots	SHEL.110651/TH2545	6761
23632	7590	06/27/2005	EXAMINER	
SHELL OIL COMPANY			WILSON, KATINA M	
P O BOX 2463			ART UNIT	
HOUSTON, TX 772522463			PAPER NUMBER	
			2856	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/768,618

Applicant(s)

POTS ET AL.

Examiner

Katina M. Wilson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 42 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 8, 10, 12-16, 18, 20-30, 34-38 and 40 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 9, 11, 17, 19, 31-33, 39 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 22, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vail, III et al 6031381 in view of Ando et al 4742298.

As to claim 1, 2, 22, and 28, Vail, III et al teaches electrical voltage and resistances are measured to inspect pipelines for wall thickness and the location of any casing collar/pipe joints. Vail, III et al teaches current passes from electrode A to electrode F along the casing, electrodes C, D, E are position apart from one another in electrical contact with the interior of casing and measure a voltage drop between electrodes C and D and electrodes D and E (abstract, figure 4, col. 8, lines 20-24). Vail, III et al does not clearly teach how the circuitry travels through the borehole casing. However, Ando et al teaches an apparatus for detecting surface flaw of pipeline where the detecting circuitry is mounted on a pig (col. 6, lines 46-63). It would have been obvious to one skilled in the art at the time the invention was made to mount Vail's, III et al pipeline inspection circuitry to a pig. The modification would enable the inspection circuitry to travel through the pipeline.

3. Claims 3, 4, 7, 10, 18, 29, 30, 33, 34 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vail, III et al 6031381 in view of Ando et al 4742298 as

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applied to claims 1, 2, 22, and 28 above, and further in view of Couchman et al 6539431b1.

As to claims 3, 4, 7, 8, 10, 29, 30, 33 and 34 neither, Vail, III et al nor Ando et al teach the first or second contacts comprise one or more devices are brushes. However, Couchman et al teaches that one or more devices are brushes/bristles. Modification to Vail's III et al and Ando's et al pipeline pig to include brushes/bristles would have been obvious to one skilled in the art at the time the invention was made to maintain contact with the inner wall of the pipeline regardless of the diameter of the inner wall of the pipeline (col. 4, lines 23-38).

As to claim 18 and 40, neither, Vail, III et al nor Ando et al teach compensating for no contact events. However, Couchman et al teaches maintain magnetic contact with pipeline, bristle sets 44 and 46 to maintain engagement with the inner wall of the pipeline for all anticipated dents or other non-circular features.

4. Claims 12 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vail, III et al 6031381 in view of Ando et al 4742298 as applied to claims 1, 2, 22, and 28 above, and further in view of Potapenko 2190320.

As to claims 12 and 34 neither, Vail, III et al nor Ando et al teach a voltmeter is used. However, Potapenko teaches a voltmeter may be connected directly to electrodes. It would have been obvious to one skilled in the art at the time the invention was made to connect a voltmeter directly to electrodes C, D, and/or E for measuring the electrode potential difference (col. 2 of page 2, lines 15-19).

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5. Claims 13-15 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vail, III et al 6031381 in view of Ando et al 4742298 as applied to claims 1, 2, 22, and 28 above, and further in view of Applicant's admitted art (page 9, paragraph 26).

As to claims 13-15, 35-37 neither, Vail, III et al nor Ando et al teach an electromechanical device for reducing noise; electromechanical device is a mercury contact; electromechanical device is a slip ring contact. However, Applicant admits those skilled in the art will recognize that any number of contact devices and/or low noise electromechanical device may be used with the current invention. Mercury contacts by Mercotac Inc. have been used to successfully reduce noise to the microvolt range and slip rings by Airfyte Electronics Company have been used to transmit low noise signals.

6. Claims 20-21 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vail, III et al 6031381 in view of Ando et al 4742298 as applied to claims 1, 2, 22, and 28 above, and further in view of Ignagni 6553322 B1

As to claims 20-21, 23-27 neither, Vail, III et al nor Ando et al teach a location device for determining the position of the pig or that the location device is a odometer. However, Ignagni teaches an inertial navigation system on board the pig traveling through the pipeline is used to continuously compute the geographic position of the pig. It would have been obvious to one skilled in the art at the time the invention made to modify Ando's et al pig to travel through the pipeline to implement either in real time,

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or off-line using stored inertial sensor, odometer, and GPS survey data (abstract, col. 4, lines 41-65).

7. Claims 16 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vail, III et al 6031381 in view of Ando et al 4742298 as applied to claims 1, 2, 22, and 28 above, and further in view of Cloutier et al 4427943.

As to claims 16 and 38 neither, Vail, III et al nor Ando et al teach compensating for thermocouple voltages. However, Cloutier et al teaches a temperature and misalignment compensation circuit where diode D is connected to a temperature to voltage converter 24. It would have been obvious to one skilled in the art at the time the invention was made to incorporate temperature compensation circuit to a pig/vehicle that travels in a pipeline for tracking objects/inspection of a pipeline.

Allowable Subject Matter

8. Claims 5, 6, 9, 11, 17, 19, 31, 32, 33, 39, 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 42 is allowed.

10. The following is an examiner's statement of reasons for allowance: Claim 42 includes subject matter "first and/or second contact comprises at least one of a plurality of brushes and knives" in combination with the remaining claim limitation where the first and/or second contact is used to maintain electrical contact the pipe as the vehicle/pig moves through the pipe. References of record do not teach or suggest this limitation.

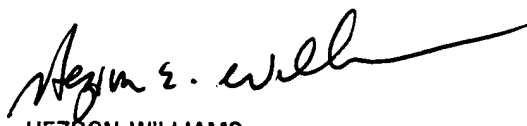
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Closing

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katina M. Wilson whose telephone number is 571-272-2209. The examiner can normally be reached on Mon-Fri 6:15am-4:00pm, off 1st Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


HEZRON WILLIAMS
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